



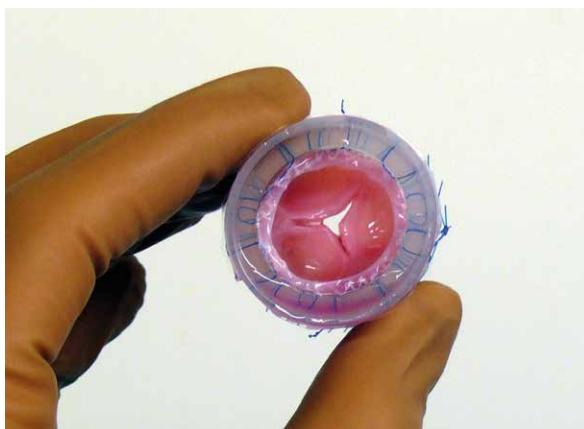
Success Story

Peter Winandy, RWTH Aachen University

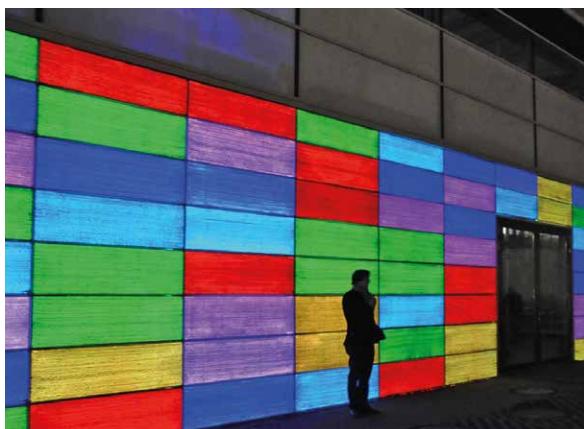
Institute for Textile Technology (ITA)
of the RWTH Aachen University

From cardiac valves to car doors

From cardiac valves to car doors – Textile technology research with software-based quality management at ITA of the RWTH Aachen University



Textile technology in medicine: Cardiac valves of synthetic textile structures are colonised with endogenous cells



Due to embedded optical fibres translucent concrete can illuminate entire façades

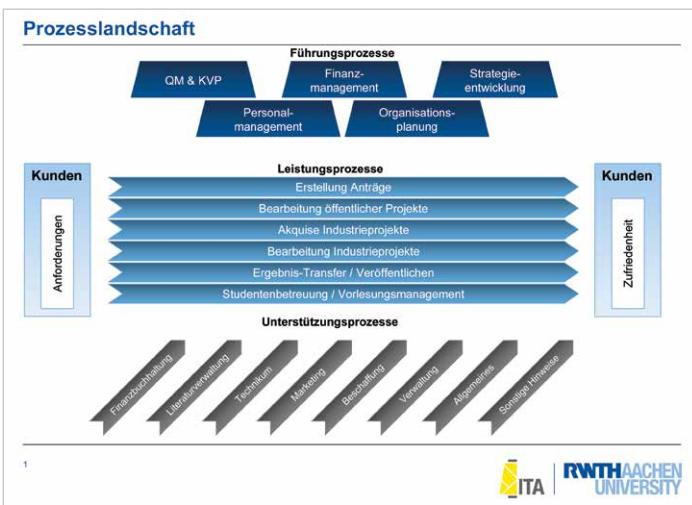


The ITA Institute for Textile Technology of the RWTH Aachen University researches semi-products and products of natural and synthetic fibres

Exciting innovations enhance our life with conveniences: Translucent concrete is a homogeneous material with light-transmitting properties due to embedded optical fibres. That makes it possible to illuminate entire façades in the dark. Cardiac valves of synthetic textile structures are colonised with endogenous cells from the patient to minimise rejection and the risk of infection. Smart textiles perform diverse functions in everyday life, such as medical monitoring of bodily functions or accident prevention due to sensors in work clothing or protective gear. And new fibre-based materials enable innovative lightweight construction concepts, for example in the automotive industry. As diverse as all of these pioneering developments are – they all originate from the research field of textile technology, which involves the manufacture of chemical fibres and their subsequent processing. The use of technical textiles comprises a broad application spectrum throughout a broad range of industries.

ITA Group combines research and services

The Institute for Textile Technology (ITA) of the RWTH Aachen University specialises in the development of textile semi-products and products of natural and synthetic fibres. The ITA, a worldwide leading institute in this field, combines research and services under one roof. In addition to academic instruction and industrial training, the institute also conducts public and private externally funded research. Together with other enterprises it forms the ITA Group, which includes ITA Technologie-transfer GmbH, a contract partner for industrial projects. New products developed by the group are marketed by international key partners and spin-off companies. The 350 employees of the ITA Group include research assistants, engineers and technicians, student assistants, technical and office staff, as well as trainees. Viola Siegl, who is in charge of the PR activities, explains: *"The ITA researches innovations for industry and society. Our key issues – from mobility to building and living, health, energy, information and communication – are interfaces to social needs and global mega trends, and also to the new high-tech strategy of the federal government and EU research policy."*



Systematic quality management organisation: The ITA of the RWTH Aachen University uses ConSense IMS to visualise its processes

Rapid growth of the organisation necessitates systematic QM

Textile technology is meanwhile essential to many industries. And this is what resulted in the rapid growth of the institute. The enormous administrative costs necessitate a systematic, transparent quality management system. Nicole Mevissen, quality management officer of the ITA, explains: *"A few years ago we established a system in which flow diagrams were created with simple programs that were made available to the employees as PDF files. This system was soon stretched to its limits. Data was provided via PDFs on a network drive, which was rather impractical and confusing. It was not possible to implement links to documents or websites."*

"Therefore we could not guarantee access to the latest versions of documents. We realised that we needed a software-based management system."

The QM team of the ITA decided to use the Integrated Management System ConSense IMS from the Aachen-based ConSense GmbH, a supplier of leading-edge software for process and quality management. The company is committed to providing comprehensive solutions for complete electronic support of DIN EN ISO 9001 and numerous other standards.

Hands-on workshop was decisive

The decision to use ConSense IMS was made after one of the hands-on workshops in which the user-friendly software was tested in practice. *"We were convinced especially by the transparent, modular and visually appealing design of the system. The basic version includes everything that is needed, without 'overwhelming' novices like us with too many extras,"* says Nicole Mevissen.

The system, which has been installed at the ITA since May 2016, simplifies management of the different business units. Before migrating the processes to the new system, the single process steps were discussed with the employees in workshops, reviewed by the supervisors and then integrated in ConSense IMS. *"That allowed us to reassess and optimise our processes, guidelines and responsibilities,"* says the quality management officer.

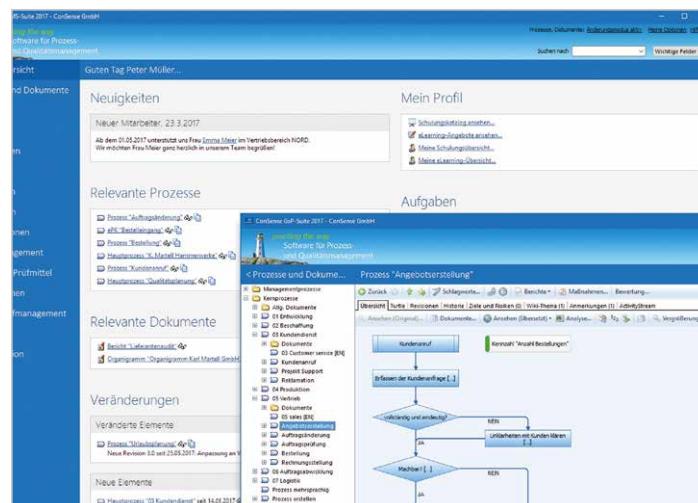
Sceptics convinced by use in practice

The introduction of a software-based quality management system met with scepticism in the institute. Some of the employees were afraid that the mandatory use of the software might cause them to lose valuable time needed for their actual work, such as research – a fear that was not confirmed. *"Many self-explanatory functions allow intuitive use of the system. When our colleagues realised that they were not losing, but saving time, it created a positive attitude towards the system. Acceptance is very good by now and the employees participate actively with suggestions for enhancements and optimisation,"* Nicole Mevissen explains.

Meanwhile, virtually all processes and documents have been migrated to the new system. The modern software ConSense IMS makes it easy to create a transparent and realistic process visualisation. All steps can be linked to the responsible employees and organisational units. The information is displayed in the form of flow diagrams. That crea-

tes transparency with respect to key processes and interfaces to other areas. *"It is important for us to be able to easily make changes or additions at a later time. Because many of the processes, such as the formalities for applications for research funds, change frequently. The process editor makes it easy to add new elements,"* Nicole Mevissen is pleased to report. The automatic revision feature ensures that all changes are traceable. The necessary reviews and approvals are controlled by automated workflows.

The institute has identified six core processes: creation of applications, processing of public projects, the acquisition of industrial projects, the processing of those industrial projects, the transfer of results, e.g. in the form of publications, and the area of student support and lecture management. Most of these processes have already been included in the new system – from preparation through processing and responsibilities. In addition, there are a number of supporting processes, such those in HR management: hiring processes, procurement, notifications of illness, vacation applications and new employee orientation.



With ConSense IMS it is easy to create and visualise transparent models of processes as they function in reality

System ensures up-to-date documentation

Since the introduction of ConSense IMS the program starts automatically when employees log in to their PCs. On the personalised start page, each user is notified directly of all pending tasks, changes and relevant content and can quickly access additional information as needed. All important documents for the workday are available exclusively through the new system, so that employees have access only to current and valid versions. Recurring tasks can be controlled by automated workflows, which are adapted exactly to the individual processes. The pending tasks are forwarded directly to the responsible employees. By linking to the ConSense action management module it is possible to directly input additional actions to be initiated and to ensure that they are processed on schedule.

Processes that can be systematically controlled in this manner include applications for funding, 95 percent of which comes from third parties. For example, the ITA has to apply for research funds from EU sources. *"In this process we have to comply with deadlines and ensure that submitted applications are complete and accurate; otherwise, we risk losing the funds. ConSense IMS allows automated and reliable control of the processes. That saves time and ensures that no important documents are missing in the end,"* Nicole Mevissen explains.

Soon to be available also for the doctoral process

And so the quality manager draws a positive conclusion: *"Our expectations of the system have been fulfilled. Now it continues to grow, together with the ITA."* The next planned step for expansion is to provide support for the doctoral process. *"Because the process of getting a PhD involves not only writing the doctoral thesis, but also requires substantial logistical effort,"* says Nicole Mevissen. In the future, all steps of the process for publication of research papers that report on pioneering discoveries in textile technology research will be supported by the new system. Innovations, researched and developed at the ITA of the RWTH Aachen, will continue to enhance our daily life with conveniences in the future. And the institute will continue to receive reliable quality management support from ConSense IMS, as they grow together.

Authors

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Contact us!

Our team of experts is ready to give you more information at any time:

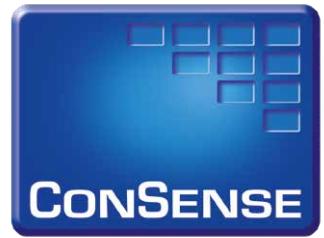
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ConSense GmbH History

ConSense GmbH is a leading supplier of software technology for quality and integrated management systems. ConSense GmbH, based in Aachen (Germany), has been developing scalable solutions for all company sizes since 2003, with development work concentrating on the optimum support of organizational processes and user-friendliness. ConSense GmbH acts as a consultant for the technical, organizational and personnel introduction of ConSense software solutions with modern strategies and concepts from the start to the operational phase. ConSense software products have more than 600 customers and users in six figures in all types of industry.



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